WHAT IS CLAIMED IS:

1. A patient monitoring system comprising:

(A) a non-invasive cardiac output sensor, the non-invasive cardiac output sensor being capable of acquiring a signal from a patient indicative of blood flow through a heart of the patient;

(B) a multi-lead electrocardiogram (ECG) sensor, the multi-lead ECG sensor comprising a plurality of ECG electrodes capable of acquiring a plurality of ECG signals from the patient; and

(C) a patient monitor console, including

(1) an analysis module, the analysis module being coupled to the non-invasive cardiac output sensor and to the multi-lead ECG sensor, the analysis module processing the signal from the patient indicative of blood flow to produce a value pertaining to cardiac output, and

(2) a display, the display being coupled to the analysis module, and the display displays the value pertaining to cardiac output and an ECG waveform generated based on the ECG signals.

2. A system according to claim 1, wherein the non-invasive cardiac output sensor further comprises first and second electrodes, and wherein the analysis module produces the value pertaining to cardiac output by determining an impedance between the first and second electrodes, the impedance between the first and second electrodes being a function of an amount of blood located in a blood flow path that passes through the heart of the patient.

3. A system according to claim 2, wherein the non-invasive cardiac output sensor further comprises third and fourth electrodes, wherein an excitation signal is applied to the patient using the third and

fourth electrodes, and wherein the signal from the patient indicative of blood flow is a response signal that is generated in response to the excitation signal.

4. A system according to claim 1, wherein the value pertaining to cardiac output pertains to a volume of blood pumped by the heart per unit time.

5. A system according to claim 1, wherein the value pertaining to cardiac output pertains to a volume of blood pumped by the heart each heartbeat.

6. A system according to claim 1, wherein the value pertaining to cardiac output pertains to a resistance to flow of blood in an arterial system of the patient.

7. A system according to claim 1, wherein the value pertaining to cardiac output is a work index indicative of an amount of work performed by the heart to eject a volume of blood into an aorta of the patient.

8. A system according to claim 1, further comprising

a blood pressure sensor, the blood pressure sensor being connected to the analysis module, and wherein the display displays blood pressure information based on a signal acquired from the blood pressure sensor;

a pulse oximetry sensor, the pulse oximetry sensor being connected to the analysis module, and wherein the display displays information pertaining to pulse oximetry based on a signal acquired from the pulse oximetry sensor;

a carbon dioxide sensor, wherein the analysis module is connected to the carbon dioxide sensor and wherein the display further

displays information pertaining to carbon dioxide content in respiratory gas based on a signal from the carbon dioxide sensor.

9. A system according to claim 8, wherein at least one of the blood pressure sensor, the pulse oximetry sensor, and the carbon dioxide sensor is connected to the analysis module by way of a network communication link.

10. A system according to claim 1, further comprising a communication interface capable of establishing a communication link between the patient monitoring system and a local area network of a medical facility in which the patient monitoring system is located.

11. A system according to claim 10, wherein the patient monitor console is portable and the communication interface is capable of wirelessly connecting the patient monitoring system to the local area network.

12. A system according to claim 1, wherein the patient monitor console is portable and wherein the system further comprises a docking station capable of receiving the patient monitor console and connecting the console to electrical power and a local area network of a medical facility in which the patient monitoring system is located.

13. A system according to claim 1, wherein the patient monitor console is portable and comprises a carrying handle and weighs less than twenty pounds.

14. A system according to claim 1,

wherein the system further comprises a plurality of additional sensors and a dial operator input device,

wherein the display displays a cardiac output parameter window and a plurality of additional parameter windows corresponding to

parameters sensed by respective ones of the plurality of additional sensors,

wherein the dial operator input device is rotatable in either direction to highlight different parameter windows, and

wherein, when the cardiac output parameter window is highlighted, and the dial operator input device is pressed while the cardiac output parameter window is highlighted, the display displays a plurality of cardiac output menu options, the cardiac output menu options being selectable by an operator to cause the display to display additional information pertaining to cardiac output to the operator and to receive inputs from the operator to adjust processing of the signal from the cardiac output sensor.

15. A system according to claim 14, wherein the non-invasive cardiac output sensor further comprises first and second electrodes, and wherein the analysis module produces the value pertaining to cardiac output by determining an impedance between the first and second electrodes, the impedance between the first and second electrodes being a function of an amount of blood located in a blood flow path that passes through the heart of the patient.

16. A system according to claim 15, wherein the plurality of menu options includes an option that causes the patient monitoring system to test placement of the first and second electrodes on the patient.

17. A system according to claim 15, wherein the plurality of menu options includes a help option that causes the display to display help information describing proper electrode placement locations on the patient.

18. A system according to claim 15, wherein the plurality of menu options includes a help option that causes the display to display help information describing proper skin preparation prior to electrode placement on the patient.

19. A system according to claim 15, wherein the plurality of menu options includes an option to change a type of impedance waveform that is displayed to an operator.

20. A patient monitoring system comprising:

(A) means for non-invasively monitoring cardiac output, including means for acquiring a signal from a patient indicative of blood flow through a heart of the patient;

(B) means for acquiring a plurality of ECG signals from the patient;

(C) means for processing the signal from the patient indicative of blood flow to produce a value pertaining to cardiac output; and

(D) means for displaying the value pertaining to cardiac output and an ECG waveform generated based on the ECG signals.

21. A patient monitoring system comprising:

(A) a non-invasive cardiac output sensor, the non-invasive cardiac output sensor being capable of acquiring a signal from a patient indicative of blood flow through a heart of the patient;

(B) a communication interface, the communication interface being capable of establishing a communication link between the patient monitoring system and a local area network of a medical facility in which the patient monitoring system is located; and

(C) a patient monitor console, including

(1) an analysis module, the analysis module being coupled to the non-invasive cardiac output sensor, the analysis module processing the signal from the patient indicative of blood flow to produce a value pertaining to cardiac output, and

(2) a display, the display being coupled to the analysis module, and the display displays the value pertaining to cardiac output; and

wherein the communication interface is capable of transmitting the value pertaining to cardiac output over the local area network.

22. A system according to claim 21, wherein the non-invasive cardiac output sensor further comprises first and second electrodes, and wherein the analysis module produces the value pertaining to cardiac output by determining an impedance between the first and second electrodes, the impedance between the first and second electrodes being a function of an amount of blood located in a blood flow path that passes through the heart of the patient.

23. A system according to claim 21, wherein the non-invasive cardiac output sensor further comprises third and fourth electrodes, wherein an excitation signal is applied to the patient using the third and fourth electrodes, and wherein the signal from the patient indicative of blood flow is a response signal that is generated in response to the excitation signal.

24. A system according to claim 21, wherein the value pertaining to cardiac output pertains to a volume of blood pumped by the heart per unit time.

25. A system according to claim 21, further comprising

a blood pressure sensor, the blood pressure sensor being connected to the analysis module, and wherein the display displays blood pressure information based on signals acquired from the blood pressure sensor;

a pulse oximetry sensor, the pulse oximetry sensor being connected to the analysis module, and wherein the display displays information pertaining to pulse oximetry;

a carbon dioxide sensor, wherein the analysis module is connected to the carbon dioxide sensor and wherein the display further displays information pertaining to carbon dioxide content in respiratory gas.

26. A system according to claim 21, wherein the patient monitor console is portable and the communication interface is capable of wirelessly connecting the patient monitoring system to the local area network.

27. A system according to claim 21, wherein the patient monitor console is portable and wherein the system further comprises a docking station capable of receiving the portable monitor console and connecting the console to electrical power and a local area network of a medical facility in which the patient monitoring system is located.

28. A system according to claim 21,

wherein the system further comprises a plurality of additional sensors and a dial operator input device,

wherein the display displays a cardiac output parameter window and a plurality of additional parameter windows corresponding to parameters sensed by respective ones of the plurality of additional sensors,

wherein the dial operator input device is rotatable in either direction to highlight different parameter windows, and

wherein, when the cardiac output parameter window is highlighted, and the dial operator input device is pressed while the cardiac output parameter window is highlighted, the display displays a plurality of cardiac output menu options, the cardiac output menu options being selectable by an operator to cause the display to display additional information pertaining to cardiac output to the operator or to receive inputs from the operator to adjust processing of the signal from the cardiac output sensor.

29. A system according to claim 28, wherein the non-invasive cardiac output sensor further comprises first and second electrodes, and wherein the analysis module produces the value pertaining to cardiac output by determining an impedance between the first and second electrodes, the impedance between the first and second electrodes being a function of an amount of blood located in a blood flow path that passes through the heart of the patient; and wherein the plurality of menu options includes an option that causes the patient monitoring system to test placement of the first and second electrodes on the patient.

30. A system according to claim 28, wherein the non-invasive cardiac output sensor further comprises first and second electrodes, and wherein the analysis module produces the value pertaining to cardiac output by determining an impedance between the first and second electrodes, the impedance between the first and second electrodes being a function of an amount of blood located in a blood flow path that passes through the heart of the patient; and wherein the plurality of menu options includes a help option that causes the display to display help information describing proper electrode placement on the patient.

31. A system according to claim 21, further comprising a multi-lead electrocardiogram (ECG) sensor, the multi-lead ECG sensor comprising a plurality of ECG electrodes capable of acquiring a plurality of ECG signals from the patient, and wherein the display displays an ECG waveform generated based on the ECG signals.

32. A system according to claim 31, wherein the plurality of ECG signals include leads I, II, III, V1, V2, V3, V4, V5, V6, aVR, aVL and aVF.

33. A patient monitoring method comprising:

(A) acquiring cardiac output information using a non-invasive cardiac output sensor of a patient monitoring system, the non-invasive cardiac output sensor being capable of acquiring a signal from a patient indicative of blood flow through a heart of the patient, the acquiring step including

(1) applying an excitation signal to a patient, the excitation signal being applied using first and second electrodes, and

(2) measuring cardiac impedance based on response characteristics of the heart of the patient to the excitation signal;

(B) acquiring a plurality of electrocardiogram (ECG) signals from the patient using a multi-lead ECG sensor of the patient monitoring system;

(C) transmitting the ECG signals and the cardiac output information from the patient monitoring system to a remote device by way of a local area network of a medical facility in which the patient monitoring system is located; and

(D) displaying an ECG waveform and the cardiac output information on a display.

34. A method according to claim 33, wherein the displaying step is performed at the remote patient monitor.

35. A method according to claim 33, wherein the displaying step is performed at the patient monitoring system.

36. A method according to claim 33, further comprising displaying trending information, the trending information including historical information regarding variation of a cardiac output value over a period of time.

37. A patient monitoring system comprising:

(A) a non-invasive cardiac output sensor, the non-invasive cardiac output sensor being capable of acquiring a signal from a patient indicative of blood flow through a heart of the patient, the non-invasive cardiac output sensor comprising first and second electrodes;

(B) a multi-lead electrocardiogram (ECG) sensor, the multi-lead ECG sensor comprising a plurality of ECG electrodes capable of acquiring a plurality of ECG signals from the patient;

(C) a blood pressure sensor, the blood pressure sensor being capable of acquiring blood pressure information from the patient;

(D) a pulse oximetry sensor, the pulse oximetry sensor being capable of acquiring pulse oximetry information from the patient;

(E) a carbon dioxide sensor, the carbon dioxide sensor being capable of acquiring information pertaining to carbon dioxide content in respiratory gas of the patient;

(F) a patient monitor console, including

(1) an analysis module, the analysis module being coupled to the non-invasive cardiac output sensor, the multi-lead ECG sensor, the blood pressure sensor, the pulse oximetry sensor, and the carbon dioxide sensor, the analysis

module processing the signal from the patient indicative of blood flow to produce a value pertaining to cardiac output, the analysis module producing the value pertaining to cardiac output by determining an impedance between the first and second electrodes, the impedance between the first and second electrodes being a function of an amount of blood located in a blood flow path that passes through the heart of the patient, the value pertaining to cardiac output pertains to a volume of blood pumped by the heart per unit time,

(2) a display, the display being coupled to the analysis module, and the display displaying the ECG waveform, the value pertaining to cardiac output, the blood pressure information, the carbon dioxide information, and the pulse oximetry information,

(3) communication interface capable of establishing a communication link between the patient monitoring system and a local area network of a medical facility in which the patient monitoring system is located, and

(4) a dial operator input device,

wherein the display displays a plurality of parameter windows which respectively display the cardiac output information, the ECG information, the blood pressure information, the pulse oximetry information, and the carbon dioxide information;

wherein the dial operator input device is rotatable in either direction to highlight different parameter windows; and

wherein, when the cardiac output parameter window is highlighted, and the dial operator input device is pressed while the cardiac output parameter window is highlighted, the display displays a plurality of cardiac output menu options, the cardiac output menu options being selectable by an operator to cause the display to display additional

information pertaining to cardiac output to the operator or to receive inputs from the operator to adjust processing of the signal from the cardiac output sensor.

38. A system according to claim 37, wherein the plurality of ECG signals include eight leads which are acquired directly and four leads which are derived.

39. A system according to claim 37, wherein the plurality of ECG signals include leads I, II, III, V1, V2, V3, V4, V5, V6, aVR, aVL and aVF.